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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/501,064	12/08/2004	Axel Pfeffer	OT-4995	1608

7590 03/14/2007  
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EXAMINER
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MCCALL, ERIC SCOTT

ART UNIT	PAPER NUMBER
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2855

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	03/14/2007	PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

## Office Action Summary

**Application No.**

10/501,064

**Applicant(s)**

PFEFFER, AXEL

**Examiner**

Eric S. McCall

**Art Unit**

2855

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 09 January 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-11 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-11 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 09 July 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
- 1) ☒ Certified copies of the priority documents have been received.
  - 2) ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## **BRAKE LINING MONITORING DEVICE AND METHOD**

### **NON-FINAL OFFICE ACTION**

In response to the Applicant's Request for Continued Examination dated Jan. 09, 2007.

### **CLAIMS**

#### **35 U.S.C. § 101**

New guidelines regarding statutory subject matter under 35 U.S.C. 101 have been set forth. As such, the following now applies:

35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claims 1-4 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

Independent claim 1 is non-statutory because the claim is directed to a method which does not produce a tangible result. The claimed result is the *determining* of a functionability which is not a tangible result.

Dependent claims 2-4 are also non-statutory because these claims also do not produce a tangible result.

35 U.S.C. § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1-11 are rejected under 35 U.S.C. 102(e) as being anticipated by Paielli (6,384,721).

With respect to claim 1, Paielli sets forth a method of monitoring functionability of a brake lining, comprising the following steps:

measuring a value (ie. capacitance) that characterizes a dielectric constant of a lining material (abstract) wherein the lining material (42, brake pad) is provided between a first, pressing braking member (brake caliper) and a second, pressed braking member (48, brake rotor);

inherently comparing the measured value (ie. measured capacitance) with a reference value (ie. acceptable capacitance for a lining material) for the lining material; and

determining the functionability when the measured value is within a specific tolerance range (col. 3, lines 30+ and col. 4, lines 55+).

With respect to claim 2, Paielli suggests that the measured value is determined by a static capacitance measurement (via the conductors 24 & 26).

With respect to claim 4, Paielli sets forth at least two conductors (24 & 26) located in the lining material.

With respect to claim 5, as set forth above, Paielli clearly sets forth the claimed subject matter thereof.

With respect to claim 6, Paielli sets forth that the conductors (24 & 26) are essentially arranged in a plane which is essentially parallel to the braking surface of the brake lining as claimed (Fig. 1).

With respect to claim 7, the conductors (24 & 26) of Paielli are interpreted as being made of foil material as claimed.

With respect to claim 8, Paielli set forth that the conductors (24 & 26) are imbedded in the brake lining material so that the brake lining material is present on both sides of the conductors in the wear direction of the brake lining (Fig. 1).

With respect to claims 9 and 10, as set forth above, Paielli clearly sets forth the claimed subject matter thereof.

With respect to claim 11, Paielli suggests that the brake lining monitoring device comprises a resistance which, in conjunction with the capacitance emitted by the at least two conductors, forms an oscillating circuit (Figs. 8-10).

Response To Arguments

The Applicant's arguments have been considered but have not been found to be persuasive. Specifically, the Applicant has argued that the prior art of Paielli does not provide a lining provided between a first pressing braking member and second pressed brake member.

The Examiner disagrees. Paielli teaches wear sensors embedded in the brake lining of a brake pad in a disc brake set-up (col. 2, lines 51+). Thus, a brake caliper (ie. a first pressing braking member) will be present to press the brake pad (ie. the lining material) into the brake rotor (ie. second pressed brake member).

The Applicant's amendments to independent claims 1, 5, and 9 merely described a basic disc brake set-up. These very same arguments also apply to a drum brake set-up.

The Applicant states that Paielli's body 22 is part of the brake pad 42 and thus only teaches a pressing member (22/42) and a pressed member (brake rotor 48). The Examiner disagrees. Paielli discusses that the disclosed brake wear sensor is part of either a drum brake set-up or a disc brake set-up. So obviously, in the hands of one having ordinary skill in the art, Figure 1 of Paielli does not show all of the components of such a set-up. For example, Figure 1 shows a disc brake set-up. It shows the brake pad and the brake rotor but it does not show the brake caliper, the caliper piston, etc. that is inherently in such a set-up. The caliper piston presses the brake pad backing plate/brake pad (lining material) into the brake rotor. Thus, either the brake caliper, the caliper piston, or the brake pad backing plate can be interpreted as the first pressing member as claimed.

If the Applicant's analogy was correct and that a first pressing braking member was not provided (ie. three distinct elements were not present), Paielli's invention would be inoperative because no mechanism would be present to press the brake pad (22/42) into the brake rotor (48).

Furthermore, even without the inherent parts of a brake system that are not explicitly shown, Figure 1 still suggests a lining material (42) provided between a first pressing brake member (22) and a second pressed braking member (48) as claimed because element 22 extends to the back side of brake pad (42) with respect to the brake rotor (48). Thus, lining material (42) is suggested as being between the first pressing brake member (22) and the second pressed braking member as claimed.

#### **CONTACT INFORMATION**

Any inquiry concerning this communication or earlier communications from the Examiner should be directed to Eric S. McCall whose telephone number is (571) 272-2183.

The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR



Art Unit: 2855

system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Eric S. McCall  
Primary Examiner  
Art Unit 2855  
March 07, 2007